December 2005

Montana Economy at a Glance

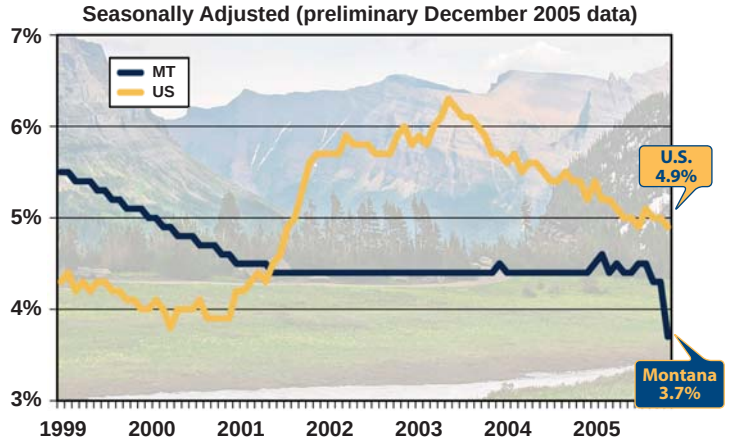
Quarterly Edition

Robert C. Marvin, Editor

In this Issue:

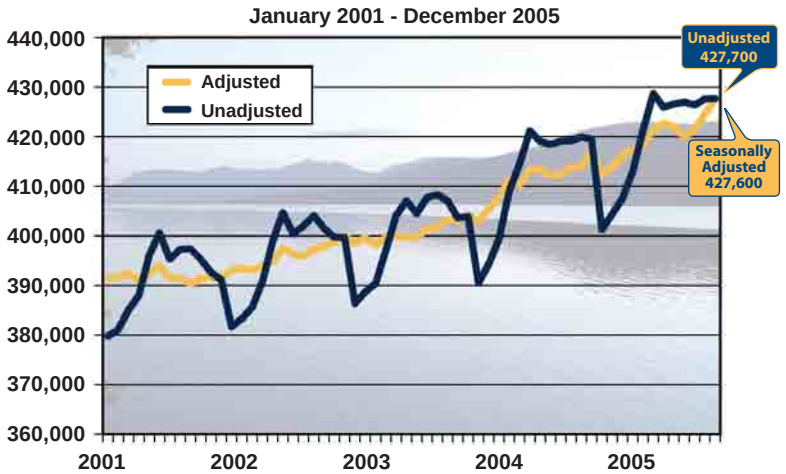
RESEARCH & ANALYSIS BUREAU
WORKFORCE SERVICES DIVISION
MONTANA DEPARTMENT OF LABOR & INDUSTRY

Unemployment Rate



Montana's seasonally-adjusted unemployment rate dropped to 3.7% in December 2005 from 4.3% in November. The U.S. unemployment rate decreased slightly, reaching 4.9% from 5.0% over the month.

Nonfarm Employment



Montana's seasonally-adjusted nonagricultural payroll employment was up 3,100 jobs (0.7%) over the month for December 2005. The largest gains were in Leisure & Hospitality, which was up by 1,300 jobs (2.3%); Total Government, up by 700 jobs (0.8%); and Manufacturing, up 500 jobs (2.6%).

County Unemployment Rates

Non-seasonally adjusted

	Dec. 2005*	Dec. 2004
UNITED STATES	4.6%	5.1%
MONTANA	3.8%	4.5%
Beaverhead	3.4%	3.8%
Big Horn	8.0%	9.6%
Blaine	2.9%	4.3%
Broadwater	3.6%	3.9%
Carbon	3.6%	4.5%
Carter	3.0%	2.3%
Cascade	3.6%	4.0%
Chouteau	2.9%	3.4%
Custer	3.4%	4.4%
Daniels	2.8%	3.7%
Dawson	3.1%	3.4%
Deer Lodge	5.6%	6.9%
Fallon	2.0%	3.0%
Fergus	5.7%	6.4%
Flathead	4.2%	5.6%
Gallatin	2.5%	3.4%
Garfield	4.3%	4.9%
Glacier	6.6%	8.3%
Golden Valley	4.3%	6.3%
Granite	4.7%	5.8%
Hill	3.5%	4.3%
Jefferson	4.4%	4.3%
Judith Basin	4.2%	5.1%
Lake	5.2%	6.0%
Lewis & Clark	3.4%	3.9%
Liberty	3.3%	4.2%
Lincoln	7.8%	10.1%
McCone	2.7%	2.5%
Madison	3.2%	4.0%
Meagher	4.9%	5.8%
Mineral	6.8%	6.9%
Missoula	3.6%	4.0%
Musselshell	4.9%	6.2%
Park	4.7%	5.5%
Petroleum	5.4%	6.5%
Phillips	3.7%	4.5%
Pondera	3.7%	5.0%
Powder River	3.2%	3.5%
Powell	5.7%	6.8%
Prairie	4.7%	5.0%
Ravalli	4.9%	5.9%
Richland	2.5%	2.8%
Roosevelt	5.5%	6.5%
Rosebud	5.4%	5.1%
Sanders	6.3%	6.6%
Sheridan	3.4%	4.0%
Silver Bow	4.0%	4.6%
Stillwater	3.1%	3.1%
Sweet Grass	1.8%	2.3%
Teton	3.3%	4.2%
Toole	2.6%	3.1%
Treasure	4.0%	4.1%
Valley	3.8%	4.2%
Wheatland	4.2%	5.7%
Wibaux	2.6%	3.0%
Yellowstone	3.0%	3.3%

Metropolitan Statistical Areas

Billings	3.0%	3.4%
Great Falls	3.6%	4.0%
Missoula	3.6%	4.0%

Micropolitan Statistical Areas

Bozeman	2.5%	3.4%
Butte-Silver Bow	4.0%	4.6%
Havre	3.5%	4.3%
Helena	3.6%	4.0%
Kalispell	4.2%	5.6%

* 2005 rate preliminary

Employment By Industry

Over-the-year change - Non-seasonally adjusted

Industry Employment (in thousands)	Dec. 2005	Dec. 2004	Net Change	Percent Change
Total Non-Agricultural	427.7	419.5	8.2	2.0%
Natural Resources & Mining	8.1	7.8	0.3	3.8%
Construction	26.5	25.2	1.3	5.2%
Manufacturing	19.4	19.3	0.1	0.5%
Trade, Transportation, Utilities	89.3	87.9	1.4	1.6%
Information	7.8	7.7	0.1	1.3%
Financial Activities	21.3	21.2	0.1	0.5%
Professional & Business Services	34.1	32.7	1.4	4.3%
Education & Health Services	57.0	55.3	1.7	3.1%
Leisure & Hospitality	57.3	55.7	1.6	2.9%
Other Services	17.4	17.8	-0.4	-2.2%
Total Government	89.5	88.9	0.6	0.7%

Correction:

In the November 2005 Issue of Montana Economy at a Glance, the fourth paragraph of the feature article, ***Show MT the Money: Montana's Gaming Industry - Revenues and Locations***, contains an error. The gaming tax revenues reported should read $145.98 per person for Mineral County (rather than $166.30), and $7.59 per person for Treasure County (rather than $9.50). Despite the revised numbers, Mineral County's gaming tax revenues remain the highest in the state, and Treasure County's remain the lowest.

Employment Diversity in Montana

By Brad Eldredge, PhD.

The 2004 Colorado College State of the Rockies Report Card ranked Flathead County first in "Balanced Employment Composition" among all rocky mountain counties[1]. According to the Report Card, "balanced employment is essential to reducing a community's vulnerability to economic downturns." One key to "balanced employment" is diversity, that is, having employment spread out among many different industries. This article compares employment diversity among Montana's counties, and explores the desirability of diversifying county employment patterns.

To evaluate employment diversity, this study employs the Hachman Index (HI), which measures how similar a region's employment composition is to that of a larger (benchmark) region[2]. Because the choice of the benchmark region affects the index value, two such regions were used in this study: Montana and the U.S. Counties with employment patterns similar to those of the benchmark regions will have HI numbers approaching one, while those with dissimilar patterns will have HI numbers approaching zero.

A Note on Methodology

This study uses recent data on employment (3rd quarter 2004 through 2nd quarter 2005) at the 3-digit NAICS code level for all counties in the state. Using this disaggregated level of employment data improves the quality of the index results.

Results: Statewide Benchmark Region

Table 1 shows the HI values for all Montana counties using the state employment pattern as a benchmark. Missoula County has the highest HI rating, meaning its industry employment patterns are the most similar to Montana's as a whole. For example, both Montana and Missoula have exactly 0.68% of their nonfarm wage and salary employment in the "publishing industries, except internet" sector, and Missoula has 1.45% of its employment in "heavy and civil engineering construction," compared to the statewide total of 1.46%.

At the other end of the spectrum, Stillwater County has the lowest HI value. This is not surprising, given the county's high concentration of employment at the Stillwater Mining Company and relative lack of other service industries, such as doctors' and dentists' offices.

Results: U.S. Benchmark Region

Using the United States for the benchmark region changes the index values, because the U.S. industry employment mix is different from that of Montana. Table 2 shows these values. In general, the index values are lower when the U.S. is used as the benchmark. This makes intuitive sense. One would expect county employment numbers to resemble the state's pattern more closely than that of the nation.

Table 1.

County	MT Hachman Index
1. Missoula	0.87
2. Yellowstone	0.82
3. Gallatin	0.79
4. Flathead	0.77
5. Cascade	0.75
6. Valley	0.71
7. Hill	0.70
8. Custer	0.70
9. Ravalli	0.69
10. Silver Bow	0.68
11. Carbon	0.66
12. Lewis & Clark	0.65
13. Fergus	0.62
14. Sheridan	0.60
15. Park	0.58
16. Sanders	0.57
17. Deer Lodge	0.53
18. Musselshell	0.52
19. Lake	0.50
20. Madison	0.49
21. Pondera	0.46
22. Lincoln	0.45
23. Beaverhead	0.45
24. Roosevelt	0.43
25. Liberty	0.41
26. Powder River	0.41
27. Dawson	0.41
28. Phillips	0.40
29. Richland	0.38
30. Glacier	0.37
31. Prairie	0.35
32. Teton	0.33
33. Garfield	0.33
34. Big Horn	0.33
35. Chouteau	0.32
36. Carter	0.32
37. Mineral	0.30
38. Blaine	0.27
39. Rosebud	0.26
40. Toole	0.26
41. Wheatland	0.26
42. Wibaux	0.25
43. Meagher	0.25
44. Granite	0.24
45. Judith Basin	0.23
46. Broadwater	0.22
47. McCone	0.21
48. Daniels	0.21
49. Jefferson	0.21
50. Treasure	0.15
51. Petroleum	0.13
52. Golden Valley	0.12
53. Sweet Grass	0.12
54. Fallon	0.12
55. Powell	0.08
56. Stillwater	0.07

Table 2.

County	U.S Hachman Index
1. Gallatin	0.66
2. Missoula	0.66
3. Cascade	0.66
4. Yellowstone	0.62
5. Flathead	0.56
6. Hill	0.53
7. Silver Bow	0.53
8. Custer	0.49
9. Park	0.47
10. Valley	0.47
11. Carbon	0.46
12. Ravalli	0.45
13. Lake	0.45
14. Sheridan	0.44
15. Lewis & Clark	0.44
16. Fergus	0.43
17. Deer Lodge	0.41
18. Pondera	0.39
19. Chouteau	0.37
20. Richland	0.32
21. Powder River	0.30
22. Sanders	0.30
23. Liberty	0.30
24. Teton	0.29
25. Madison	0.28
26. Roosevelt	0.27
27. McCone	0.25
28. Phillips	0.25
29. Toole	0.25
30. Musselshell	0.24
31. Dawson	0.23
32. Daniels	0.22
33. Glacier	0.22
34. Prairie	0.20
35. Carter	0.20
36. Golden Valley	0.19
37. Garfield	0.19
38. Wibaux	0.18
39. Beaverhead	0.17
40. Blaine	0.16
41. Mineral	0.15
42. Lincoln	0.14
43. Big Horn	0.14
44. Meagher	0.11
45. Petroleum	0.11
46. Wheatland	0.11
47. Broadwater	0.10
48. Judith Basin	0.10
49. Powell	0.09
50. Rosebud	0.09
51. Treasure	0.08
52. Fallon	0.08
53. Granite	0.07
54. Jefferson	0.05
55. Sweet Grass	0.02
56. Stillwater	0.01

The author extends his thanks to Tyler Turner for his assistance in collecting data for this article.

[1] Holmes, P. F. and Hecox, W. (2004) "Grading the Rockies" in *The 2004 State of the Rockies Report Card*. Colorado College, Colorado Springs, CO.

[2] Moore, E. (2001) "Measuring Economic Diversification" *Oregon Labor Market Information System*. Sept. 28, 2001.

When the national benchmark is used, Gallatin County moves to the top spot, indicating that its industry mix is the most similar to that of the U.S. "Forestry and logging" comprises 0.06% of Gallatin County's employment, compared to 0.07% nationally. Gallatin's low employment in "forestry and logging" matches the national pattern, but is below the Montana percentage, as the state has a relatively large proportion of its workforce in this industry. Another example of Gallatin County's similarity to the national pattern is the "clothing and clothing accessories stores" sector. This sector makes up 1.29% of Gallatin's total employment, versus 1.26% nationally. Stillwater County remains at the bottom of the list, while Sweet Grass County moves to second from the bottom.

Population and Diversity

In both the state and national benchmarks, the HI numbers indicate that a large population size seems to contribute to a high level of economic diversity. In both cases, the five most heavily populated counties are the five most diverse counties in terms of employment. Lewis and Clark County is an exception to the rule. Although it is the 6th most populous county, it only ranks 12th (15th in the U.S. benchmark) in the diversity index. Lewis and Clark County's reliance on government employment probably accounts for its low ranking.

Of Montana's 28 least populated counties, only six had HI values ranking in the top half of all counties (for the state benchmark). Again, this indicates the importance of population base to employment diversity. Small counties bordering larger counties tended to have the lowest index values. One possible explanation for this is that residents in those counties can travel to their larger neighboring county for retail and services, and therefore, employment in those sectors will be lacking in the smaller county. On the other hand, Sheridan County had a relatively high diversity index at .60 (state benchmark), despite its small population. Sheridan's distance from any large population center means that it must have employment in most retail and service industries.

The Costs and Benefits of Diversity

Just as a good financial planner would advise his client not to put all his eggs in one basket, so many economic development theorists would advise regions to have a diverse industry mix[3]. According to this line of thinking, communities with employment concentrated in one or two key industries are vulnerable if those industries experience a downturn. Diverse regions are less exposed to economic risk and their economic fortunes tend to follow those of the national or state economies rather than the fortunes of a few key industries.

[3] Henderson JV (1997) "Externalities and Industrial Development" *Journal of Urban Economics* vol. 42 p. 449-470.

[4] Porter ME (1990) *The Competitive Advantage of Nations. Free Press, New York*

Other scholars have advocated that regions specialize in particular industries in order to develop a competitive advantage in those industries[4]. Industry clusters, such as the high-tech cluster in Silicon Valley, can provide their constituent firms with access to a skilled workforce, related and supporting industries, and favorable government policies.

So, is it better to have a diverse or a concentrated industry mix? While not providing a comprehensive answer, Figures 1 and 2 do shed some light on this question. Figure 1 compares the state HI values to median household income levels in the counties. There is a statistically significant correlation between median income and both state and U.S. HI values, indicating that in general counties with more diverse economies enjoy higher median incomes. However, outliers do exist. Stillwater County, which has the lowest diversity level, enjoys the second highest median income. Seven of the eight counties falling in Quadrant IV in Figure 1 have significant mining employment. This suggests it may not be bad to have a less diverse economy if employment is centered in a high wage industry. However, these counties may be vulnerable should mining experience an economic slump.

Figure 1. Median Income

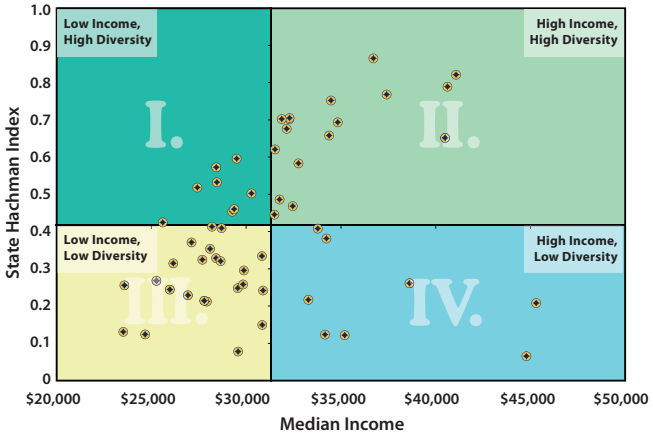


Figure 2. Wage Growth 1994 - 2004

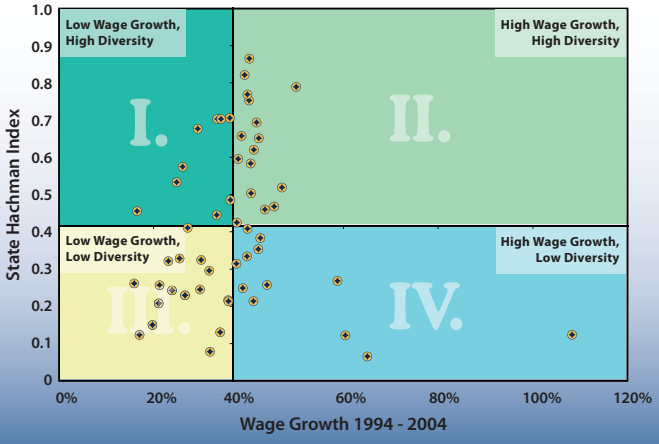


Figure 2 shows the relationship between growth in average wage per job (1994-2004) and diversity. Unlike Figure 1, no apparent relationship exists between wage growth and diversity. Statistical analysis confirms that these variables are not correlated. Once again, the three counties with the highest wage growth had below average HI values and significant employment in mining.

Conclusion

Several conclusions can be drawn from this analysis. First, Montana's most economically diverse counties are also its largest. Second, there does seem to be a relationship between economic diversity and median family income, with more diverse counties also enjoying higher income levels. Exceptions to this rule can be found in counties having high mining employment. Third, there appears to be no relationship between economic diversity and growth in average wages. Again, many of the counties with mining employment have experienced large wage increases between 1994 and 2004, while maintaining low HI values.

It appears, then, that highly diverse economies have the highest median family incomes, but the data show that exceptions to the rule are possible when employment is concentrated in a high-wage high-growth industry such as mining. These counties should be aware that they are vulnerable should the industry they rely on experience a decline, a risk to which more diversified counties are not exposed.

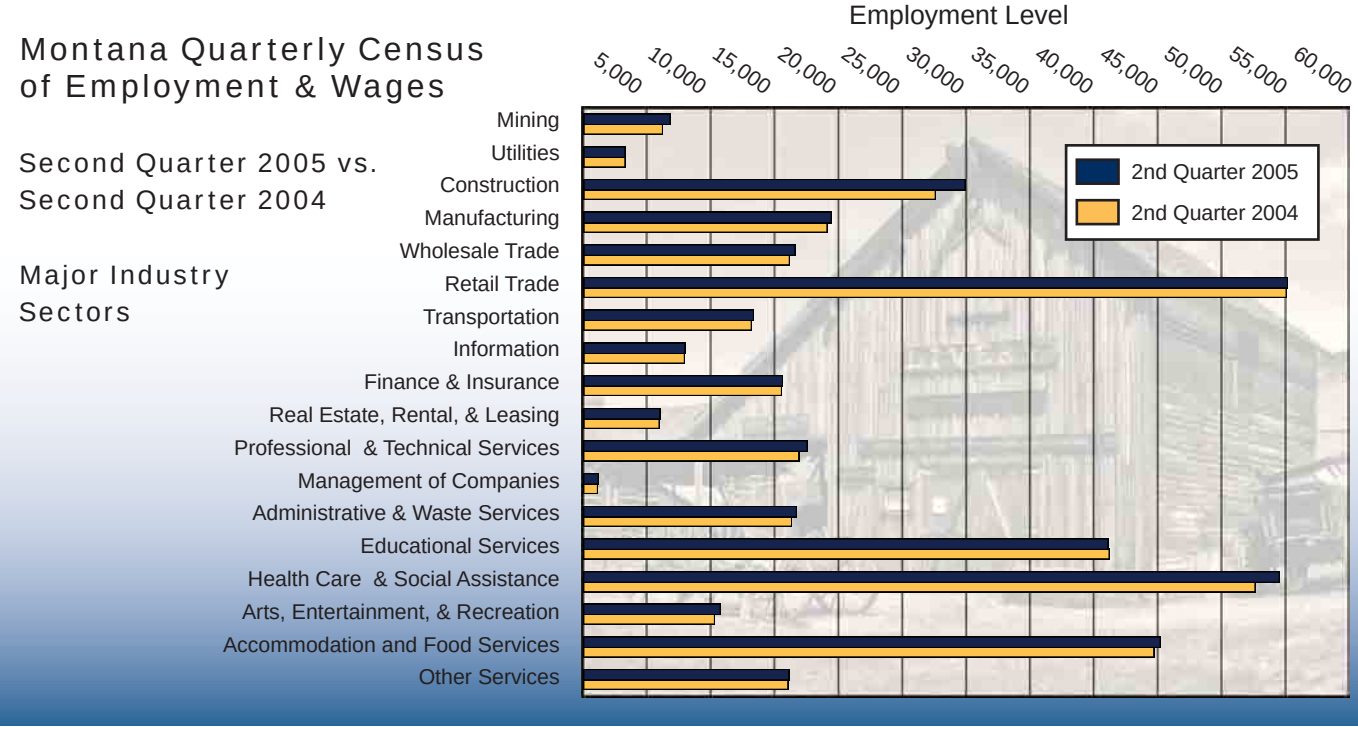
The Quarterly Census of Employment & Wages

The Quarterly Census of Employment & Wages Program (QCEW) compiles employment and wage data from all employers covered under Montana unemployment insurance. This data is compiled on a quarterly and annual basis by county, industry and ownership. Here are some highlights from the most recent quarter we can release, 2nd quarter of 2005.

Overall, the 2nd quarter 2005 employment grew at a slower pace than that of the prior quarter. At an increase of just over 7,300 payroll jobs over the year, Montana's employment showed a gain of 1.8%, compared to 3% in the 1st quarter of 2005. The private sector still showed strong growth with almost 8,300 jobs, or 2.5%.

Once again, the two major industry sectors showing the largest gains were Mining and Construction with 9.6% and 8.6%, respectively. Mining employment increased by nearly 600 jobs compared to 2nd quarter last year, while Construction added almost 2,400 payroll jobs.

Six major industry sectors showed less than one percent increases in employment over the year. They were Real Estate, Rental & Leasing; Other Services; Finance & Insurance; Information; Utilities; and Retail Trade. Educational Services showed a slight decrease over the year. However, the second quarter includes the month of June, when schools get out for the summer.



Announcing R&A's Website Renovation

To make it easier than ever to find the career and labor market information you need, the Research & Analysis Bureau is renovating its website at **www.ourfactsyourfuture.org**. Our new layout makes finding information more intuitive, using new groupings and eye-catching buttons to lead you in the right direction. This renovation will take place in two stages. The first stage, a complete redesign of our publications page, is already complete. The second stage, a redesign of our homepage and other pages, will be available to the public in early March.

Our redesigned publications page features quick links to our most popular publications, including Montana Economy at a Glance, our state and county informational fliers, and the annual Labor Day Report. We've also added an archive of feature articles from past issues of Economy at a Glance. The new page also gives you easy access to our wage publications, occupational safety and health publications, and career publications, such as the Montana Career Guide 2005 and A Job Hunting Guide for Montanans with Disabilities.

www.ourfactsyourfuture.org

MAIL OR E-MAIL? If you would like us to e-mail you a reminder and a link to this publication on our website each month, e-mail us at: mediacontacts4rad@mt.gov. Please include your mailing address as it appears on this publication and your e-mail address.

MONTANA DEPARTMENT OF LABOR & INDUSTRY
WORKFORCE SERVICES DIVISION
RESEARCH & ANALYSIS BUREAU

Return in 5 days to:
Research & Analysis Bureau
Workforce Services Division
Montana Department of
Labor & Industry
P.O. Box 1728
Helena, MT 59624-1728

Official Business
Penalty for Private Use $300

2,300 copies of this publication were produced at a unit cost of $0.87 cents per copy for a total cost of $2,000 which includes $1,537 for printing and $463 for distribution.

66107